

SPECIFICATION OBJECTIONS:

Corrections to provide proper antecedent bases for claimed subject matter:

Replace paragraph (006) with:

(006) The present invention is useful for preparing vehicle wheels such that tires mounted on them will not slip. The wheels of interest are metallic and are found on automobiles, trucks, motorcycles, trains, aircraft and bicycles. According to the present invention, the bead seat area of vehicle wheels are grit blasted in preparation for thermal spray surface treatment. A coating is then applied via a thermal spray technique, such as oxy-fuel thermal spray, oxy-fuel wire spray, plasma spray, high velocity oxy-fuel (HVOF), or twin-wire arc spray. The coating can be a refractory metal, although other metals or alloys can be used. In one embodiment, the application of the coating is such that it is bonded well with the wheel and the surface finish is rough. This rough coating, obtained from the grit blasting, the thermally applied coating or both, provides for a surface onto which the tire bead grips and maintains its position on the tire without slipping. Note that although grit blasting can be used alone or in conjunction with thermal spraying, machining or otherwise mechanically treating the bead seat of the wheel may also be used to provide for the surface required to prevent tire slippage. It is important to note that the coating material is a hard metal alloy and not a composite or cemented carbide material. Although the metal or alloy of this invention may contain carbides that have been formed during the spray processing of the coating, they are much smaller than the larger carbides present in cermets or cemented carbides and are formed in-situ in the homogeneous alloy. Cermets or cemented carbides are typically comprised of hard carbide particles in a softer matrix alloy and as such could be considered composite materials. In this configuration, the carbides can pull out during severe contact between the bead seat and the vehicle tire, and thus not be as effective as the alloy or metal of this invention.